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# The Indo-Soviet Arms Relationship

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An Intelligence Assessment

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NESA 86-10026  
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May 1986

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# **The Indo-Soviet Arms Relationship**

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**An Intelligence Assessment**

This paper was prepared by [redacted]  
Office of Near Eastern and South Asian Analysis,  
and [redacted] Office  
of Soviet Analysis. It was coordinated with the  
Directorate of Operations. [redacted]

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Comments and queries are welcome and may be  
directed to the Chief, South Asia Division, NESA [redacted]

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### The Indo-Soviet Arms Relationship

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#### Key Judgments

*Information available  
as of 2 May 1986  
was used in this report.*

The Indo-Soviet arms relationship is likely to peak in the next five years and then begin gradually to decline. Deliveries of Soviet military equipment under major arms agreements signed in the early 1980s will be completed by 1995, coinciding with the completion of Indian force expansion programs. Still, we estimate that almost half of India's combat aircraft and about half of its armored vehicles and major warships will consist of Soviet-supplied equipment by the end of the century.

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India will be looking for fewer new weapons in the 1990s and instead will concentrate on acquiring high-technology support gear, such as communications and electronic warfare systems, that will enable it to use its forces more effectively. Most of this advanced equipment will be purchased from the West. Indian political and military leaders consider Western military technology—particularly aircraft, electronics, and propulsion systems—far superior to that of the Soviets.

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Gandhi wants access to sophisticated military technology from Western Europe and the United States, in part to reduce India's dependence on the Soviet Union. Key elements in this plan are India's Western-aided weapons development efforts—the Light Combat Aircraft, the Advanced Light Helicopter, and the Arjun main battle tank—aimed at providing indigenous alternatives to Soviet weapons. Indian defense officials hope that the Light Combat Aircraft will break the "MIG cycle" and that the Arjun will preclude further imports of Soviet tanks in the 1990s. The successful development of an Indian-designed fighter aircraft program, albeit accomplished with Western assistance, would stand in marked contrast to India's 20-year effort to produce under license Soviet-designed combat aircraft—an effort that has not significantly enhanced India's self-sufficiency or technological base.

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West European suppliers will continue to meet most of India's needs for non-Soviet materiel. West German firms are heavily involved in India's indigenous weapons development programs. India has purchased a British aircraft carrier, over 400 Swedish howitzers, and additional French Mirage

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2000 fighters since January. Opportunities for US suppliers will be limited by Indian concern that the United States would embargo arms supplies in a future Indo-Pakistani conflict. The best areas for US defense cooperation will be in providing advanced subsystems and production technology—areas where New Delhi would not be concerned that a US embargo would immediately affect Indian combat capabilities. Antiarmor technology and India's Light Combat Aircraft program have been identified as areas for cooperation. India is also interested in US communications and electronic warfare systems. [REDACTED]

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Developing a defense relationship with the Indians will require patience on the part of both Washington and US defense industries. The United States will be faced with complying with New Delhi's seemingly endless delays in completing agreements and understandings. Last year's extended delay in obtaining Indian acceptance of the nuclear assurances attached to the Memorandum of Understanding on technology transfer is an indicator. Since then, New Delhi has resisted a formal General Security of Military Information Agreement, preferring ad hoc arrangements instead. [REDACTED]

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US firms will find the Indians' arms negotiating style exasperating and their procurement procedures frustrating. [REDACTED]

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[REDACTED] unsuccessful US attempts to sell C-130 transport aircraft and TOW missiles to India probably will dissuade other US arms manufacturers from making a strong attempt to develop an Indian market. [REDACTED]

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The Soviets value their dominant position in the Indian arms market and view growing Western military sales to India with concern. From the Soviet perspective, arms sales have muted Indian criticism of their invasion of Afghanistan, provided access to key Indian political and military decisionmakers, gained Indian support in international forums, complemented Soviet economic and propaganda efforts in India, and provided a basis for what Moscow hopes eventually will become a wider military relationship with New Delhi. We expect Moscow will:

- Use its official and press connections and its familiarity with the Indian procurement system to lobby for additional arms purchases.

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- Divert Indian attention by offering new advanced arms, hoping prolonged negotiations will delay deliveries.
- Deliver weapon systems, such as nuclear attack submarines, which have never been exported to the Third World.

At the same time, the Soviets will continue to demonstrate their pique at India's arms diversification efforts by selectively raising interest rates and delaying final agreements and delivery of high-profile items like the MIG-29 fighter.

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## The Indo-Soviet Arms Relationship

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### Strategic Ties

Arms agreements have been the most visible aspect of the Indo-Soviet bilateral relationship. We estimate that India has purchased about \$14 billion worth of defense materiel from the USSR during the past 25 years, making Moscow New Delhi's primary arms supplier.<sup>1</sup> Low prices, concessionary financing, and attractive coproduction agreements are regularly cited by US Embassy and

has relied so heavily on Moscow for security assistance. Economic ties also are a crucial element in the relationship but are declining in importance. Moscow remains India's second most important trading partner—after the United States—but Soviet officials are concerned about their declining role. Intensified Soviet efforts to sell more machinery and equipment have met with only limited success, in our judgment.

Shared strategic perceptions and threats have provided a political framework for the Indo-Soviet arms relationship. Embassy reporting indicates that both Moscow and New Delhi see Beijing as their long-term rival in Asia. As viewed from Moscow, India's size, location, and regional dominance make it an important part of Soviet efforts aimed at containing the Chinese. The Soviets also regard India as a leader in the Nonaligned Movement, capable of checking Chinese and US influence in the Third World.

Indian policymakers view Soviet military and economic aid as a crucial counterweight to Chinese and US influence in Pakistan, Bangladesh, and Sri Lanka, according to Embassy reporting. Without Soviet security assistance, India could not have achieved a significant advantage in military equipment over Pakistan, its most immediate threat.

<sup>1</sup> Western suppliers sold India approximately \$5 billion worth of military equipment during the same period.

### An Evolving Relationship

The Indo-Soviet arms relationship has grown over the past quarter century, coupling increasingly larger agreements and more sophisticated arms. India's purchases rival in size those of Libya, Iraq, Syria, and Cuba. Agreements signed in the 1960s were modest—totaling slightly more than \$1 billion for the decade—but India became the first non-Communist country to coproduce a major Soviet weapon system—in this case, the MIG-21. In the next 10 years, which included the 1971 Indo-Pakistani war, the value of Indo-Soviet arms agreements jumped to nearly \$3 billion, and New Delhi's purchases included Osa-class missile boats, T-72 tanks, and BMP-1 infantry combat vehicles. In the first half of the 1980s, the combined value of Indo-Soviet arms agreements approached \$10 billion, and India became the first Third World country to order Kilo-class submarines, Tarantul-class missile corvettes, and TU-142 Bear antisubmarine patrol aircraft. India also acquired coproduction rights to the T-72 tank and BMP-2 infantry fighting vehicle. All of these weapons will be in the Indian arsenal by the end of the decade. The gap between the time Moscow fielded new equipment with Soviet forces and sold it to India narrowed considerably after 1980.

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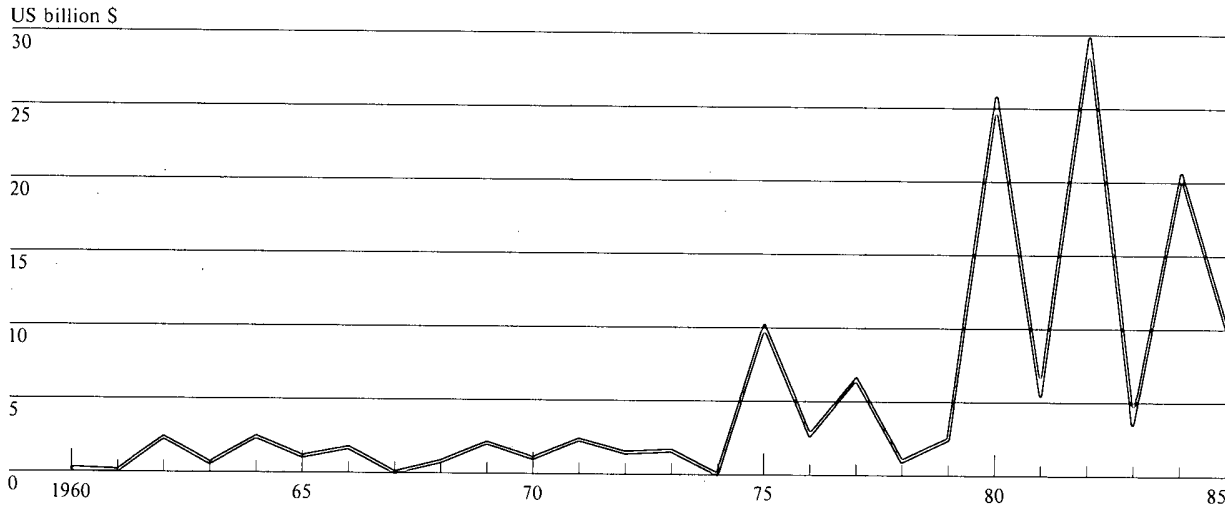
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**Figure 1**  
**Indo-Soviet Arms Agreements, 1960-85**



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India and the USSR handle payment through a ruble-rupee clearing account. Prices for Soviet military equipment are converted from rubles to rupees, which New Delhi pays into a central account. Moscow uses these funds to purchase Indian manufactured and consumer goods, as well as to pay for aid programs, diplomatic operations, and other official activities in India. This arrangement allows New Delhi to conserve its scarce hard currency. [redacted]

As a result of the long Indo-Soviet arms relationship, the Indian military is heavily dependent on Soviet weapons. Some 65 percent of the combat aircraft, 40 percent of the tanks, and 70 percent of the warships in the Indian arsenal are Soviet in origin. We estimate that at least 3,390 Indian officers and enlisted men have been trained in the USSR since 1975, and about 500 Soviet technicians usually are present in India to help maintain Soviet-built equipment and assist in the construction of coproduction facilities and military bases. [redacted]

Nevertheless, unlike many of Moscow's clients—including Cuba, Libya, and Syria—[redacted]

[redacted] reports. Indian policymakers argue that their non-aligned foreign policy would require the extension of similar privileges to other great powers if New Delhi agreed to Moscow's requests, according to US Embassy reporting. The Indians also have restricted the number and movements of Soviet technicians and training personnel in India, most recently turning down a Soviet offer to permanently station technicians at major Indian airbases. [redacted]

[redacted] the Indo-Soviet arms relationship has featured:

- Persistent Indian requests for advanced Soviet weaponry to solidify its position as the dominant regional power.

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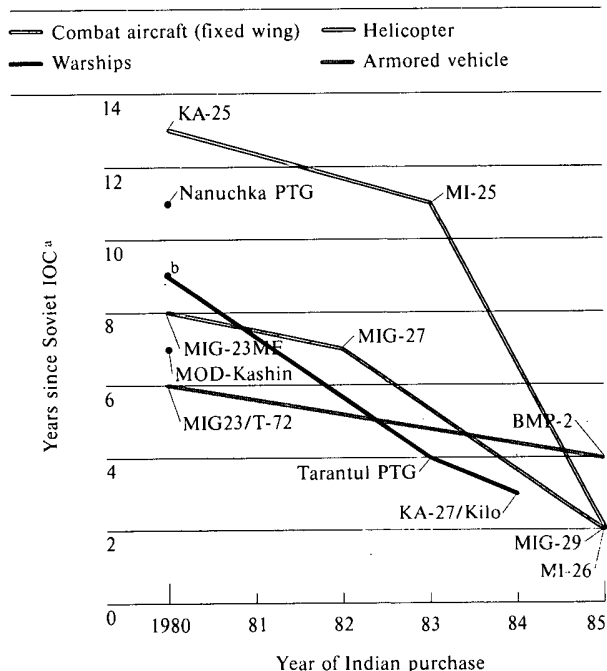
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**Figure 2**  
**Indian Access to New Soviet Weapons,**  
**1980-85**



<sup>a</sup> Initial Operational Capability.

<sup>b</sup> This point is halfway between Nanuchka PTG and MOD-Kashin.

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- Soviet efforts to provide arms to India to offset the effect of US arms deliveries to Pakistan.
- Indian attempts to increase its leverage with Moscow by diversifying its arms purchases.

#### Why Not the Best?

Indian negotiators have consistently pressed Moscow for its most advanced conventional weaponry over the last decade.

In our opinion, prestige has been a dominant factor behind these Indian requests. Indian ambitions of being the leading regional power in South Asia with growing global political responsibilities lie behind the arguments for the acquisition of equipment as capable as that in the arsenals of the great powers. India now possesses such weapons from both the USSR—T-72M tanks and MIG-27 attack aircraft—and the West—Mirage 2000 fighters, Sea Harrier V/STOL fighters, and Sea King antisubmarine warfare helicopters.

Moscow generally has tried to meet Indian requests for advanced arms, although delivery schedules have often slipped.

that the Soviets could provide advanced combat systems, such as the T-72M tank, but not in the quantities asked for because of Moscow's own needs.

#### The Afghanistan Factor

Soviet willingness to meet Indian requests for advanced arms has increased since the Soviet invasion of Afghanistan and the subsequent increased flow of US arms to Pakistan, especially F-16 fighters, Harpoon

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antiship missiles, and AIM-9L air-to-air missiles.

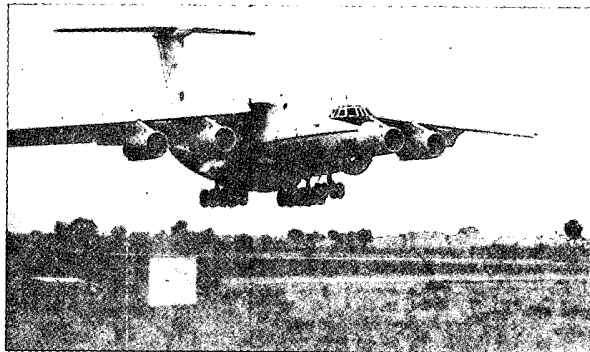
The timing of a major Indo-Soviet arms deal shortly after the Soviet invasion of Afghanistan suggests that traditional Soviet generosity in providing arms to India was enhanced by New Delhi's restraint in criticizing the Soviet invasion.

Indira Gandhi at first took a tough stand on Afghanistan, refusing to endorse the invasion when Soviet Foreign Minister Gromyko visited in March 1980. Two months later, the USSR and India signed a comprehensive arms agreement worth an estimated \$2.4 billion—the largest in Indian history—that included T-72 tanks, BMP infantry combat vehicles, naval combatants, and an option to buy the T-80 tank when it became available for export. Since then, India has not publicly criticized the invasion.

#### **Diversification**

In our judgment, the Soviet invasion of Afghanistan prompted India to diversify its arms sources, forcing Moscow to offer advanced weapons, thereby expanding the Indo-Soviet arms relationship. According to Embassy reporting, Indira Gandhi was criticized by other nonaligned states during the Nonaligned summit meeting in 1980 for adhering too closely to the Soviet line on Afghanistan. We believe this criticism, combined with Indian fear of becoming too dependent on Moscow, led New Delhi to sign large arms agreements with West European states, including France for Mirage 2000 fighters, West Germany for Type 1500 submarines, and Britain for Sea Harrier V/STOL fighters.

Moscow responded by offering even more advanced systems and by criticizing Western terms and equipment. The biggest Soviet push came in March 1982 when Defense Minister Ustinov visited New Delhi with a 70-member delegation, including 31 generals and admirals, on two weeks' notice.



Indian Air Force IL-76 MD

When Prime Minister Indira Gandhi visited Moscow six months later, the Soviets offered additional Kashin-class destroyers, SU-22 attack aircraft, SA-9 surface-to-air missiles.

#### **Indian Modernization Programs**

Indian modernization plans for the next decade call for reducing dependence on Soviet weapons through indigenous arms development projects that we believe stand a good chance of success. High-ranking Indian defense officials publicly claim that in the 1990s India will be self-sufficient in the production of major weapon systems. We believe this assertion is exaggerated, but several Indian arms development programs now under way stand a good chance of succeeding because of significant Western technical assistance and the backing of senior Indian defense officials. India's proposed Light Combat Aircraft, Arjun main

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battle tank, and Advanced Light Helicopter are being designed in large part by West German firms. The indigenously designed Godavari-class frigate, already in production, is based on the British Leander-class frigate and contains numerous British subsystems.

The Indian need for large quantities of new Soviet equipment will diminish as the growth of their armed forces slows.

say Indian defense planners are beginning to speculate about reducing the size of the Army as it becomes more mechanized and less of a leg-infantry force. New Delhi also is looking for high-technology command, control, and communications systems; intelligence-gathering systems; and other systems that will enable it to use its forces more effectively.

hope to purchase most of these systems from the West.

Nevertheless, New Delhi will remain heavily dependent on Moscow. We believe the Indo-Soviet arms relationship will peak in the next five years and then only gradually decline. Indian modernization programs based on Soviet weapons produced in the early 1970s—such as the T-72 tank, MIG-23 fighter, and modified Kashin-class destroyer—will near completion at the end of the decade. We estimate that by the end of the century approximately 45 percent of India's combat aircraft, 50 percent of its armored vehicles, and 55 percent of its major warships will consist of Soviet-supplied equipment. This will require a sizable spare parts and maintenance program involving Soviet specialists in India. We believe New Delhi will also prefer to maintain close defense ties to Moscow as a way of maintaining leverage with Western arms suppliers.

#### Air Force

We believe the Indian Air Force is the closest of the three military services to turning away from Moscow. We project that the percentage of Soviet-model combat aircraft in the Indian inventory will peak in 1990 at 70 percent and then decline. The decline will be caused mainly by the delivery of West European

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#### *Coping Without Soviet Military Assistance: A Viable Option*

*We believe India could cope with a cutoff of Soviet military assistance. A cutoff in the near term would reduce the operational readiness of India's Soviet-built equipment, but the Indians could take several steps to minimize this problem. They could immediately curtail training and normal peacetime operations and step up the production of spare parts for those weapons produced under license. New Delhi could also attempt to purchase subsystems and spare parts from non-Soviet sources, including Egypt, Yugoslavia, and North Korea, as well as Western arms manufacturers that have helped India and other Third World countries to maintain and upgrade Soviet-model equipment.*

*Over the longer term, the Indians would increase the number of Western-made weapons in their inventory and step up indigenous development and production of weapons designed with Western assistance. Alternatively, the Indians could produce fully developed Western systems to reduce their development costs. We believe New Delhi would end its policy of not engaging in joint maneuvers and training exercises with foreign militaries. This change would expose the Army, Navy, and Air Force to new tactics, logistics, and maintenance procedures that arguably could do more to increase their war-fighting capabilities than significant new arms purchases.*

*We estimate that it would cost the Indians at least \$15 billion to replace the major Soviet weapon systems in their inventory with comparable Western arms. The Indian economy could not sustain a large-scale program of Western arms purchases, in our judgment, unless the government received substantial financial help from the West and spread the costs over 20 years.*

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advanced trainer aircraft and the initial production of India's Light Combat Aircraft. Additional purchases of French Mirage 2000s, favored by the Air Force, will accelerate this trend.

**Light Combat Aircraft.** Development of India's Light Combat Aircraft (LCA) is the key Indian program for reducing dependence on Soviet combat aircraft. The LCA program is being championed by Defense Science Adviser Arunachalam, probably the most influential official in the Indian arms procurement system, as a stimulus for the Indian aerospace industry.

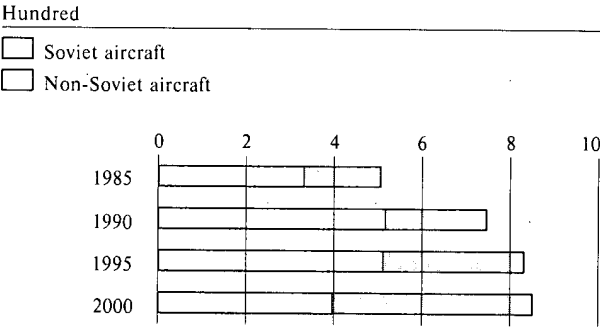
which they expect to be a first-class fighter and attack aircraft, with a fly-by-wire control system and an indigenously developed turbine engine, using composite materials to build most of the airframe. Although the Indians lack the technology necessary to produce such an aircraft, they have chosen Messerschmitt-Boelkow-Blohm (MBB) of West Germany to do most of the preliminary design work. We believe that, as the Indians get further into this program, they will reduce their expectations and settle for a less capable, but still adequate, fighter built with considerable Western assistance and subsystems. Preliminary plans call for the first LCA prototype to fly in 1992 and for the start of a 600-aircraft production run in the mid-1990s.

**Western Aircraft.** The Air Force is planning to purchase 30 advanced Western jet trainers and coproduce 100 more in the next 10 years.

The Air Force's first and second choices for this aircraft are the British HAWK and French Alphajet. Press reports indicate India has purchased nine additional Mirage 2000s to supplement the 40 already on order.

**Soviet Fighters.** The Soviets are likely to push sales of additional combat aircraft as they attempt to derail the LCA program, but in our judgment they will not succeed. By 1990 the Air Force will have received all of the Soviet MIG-23s now on order and completed licensed production of late-model MIG-21s. Coproduction of 165 MIG-27 attack aircraft is expected to end in the early 1990s.

Figure 3  
Indian Air Force Combat Aircraft,  
1985-2000



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Additional purchases of Mirage 2000 fighters, 49 of which are already on order, have been recommended by the Air Force and will probably preclude a larger MIG-29 purchase and coproduction of that aircraft.

**Support Equipment.** In addition to reducing its dependence on the Soviets for combat aircraft, we believe that the Air Force will focus on improving training and maintenance—an effort that will increase the amount of Western equipment in its inventory. Recent Air Force chiefs have expressed interest in US and West European air combat instrumentation ranges and flight simulators,

the Air Force has turned to Western suppliers for spare parts and advanced subsystems for its Soviet aircraft. The Air Force is also planning to upgrade significantly its electronic warfare capabilities with Western assistance.

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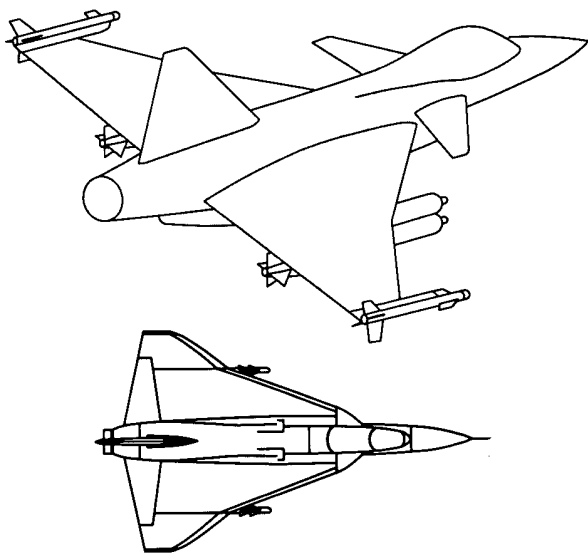
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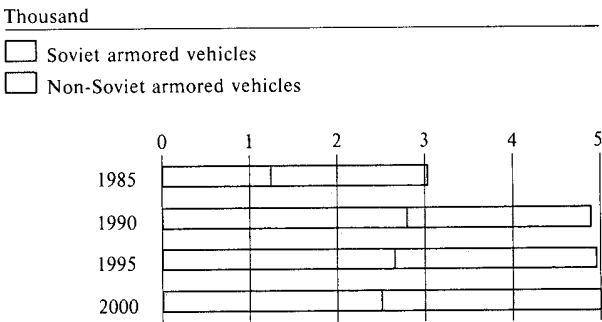
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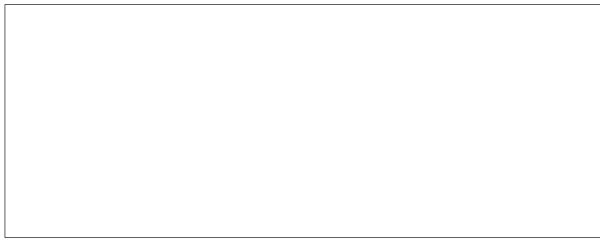
Artist's impressions of the Light Combat Aircraft

Figure 4  
Indian Army Armored Vehicles,  
1985-2000



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**Army**

We expect the Indian Army's reliance on Moscow to grow significantly before peaking in 1990 when the Indians hope to begin full-scale production of the Indian Arjun main battle tank.

**Arjun Tank.**

The Arjun program, although behind schedule, has been infused with additional funds. Several prototypes built with West German assistance have been seen. The Army wants to complement its main battle tanks with Swedish IKV-91 light tanks and Western wheeled armored reconnaissance vehicles. The Army is shopping for Western upgrades and modifications, including fire-control systems and engines, for its Soviet and Western tanks.

**Other Materiel.** The Army recently concluded its eight-year search for 155-mm towed howitzers by purchasing 420 Swedish artillery pieces.

the purchase of self-propelled 155-mm guns now appears to depend on fitting a US-built turret to a Vijayanta tank chassis.

the Army also wants to buy night-vision devices and small arms from the United States and Western Europe.

**Helicopters.** Army aviation plans are based on purchases of Western attack helicopters and the development of an Advanced Light Helicopter with Western assistance. The Army plans to buy 200 Western antitank helicopters instead of more Soviet MI-25 Hinds for its new aviation corps. The Hinds, a dozen of which are operated by the Air Force, performed poorly in field exercises in mid-1985, according to defense attache reports.

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**Soviet Deliveries.** The Army will remain dependent on Moscow for over half of its armored vehicle inventory, according to our projections. The Indians have already purchased 800 T-72 tanks and will begin assembly of the improved T-72M this year. We expect that BMP infantry combat vehicles will continue to arrive from Moscow until the licensed production of the BMP-2 begins sometime in the late 1980s. The Army also is likely to remain dependent on Soviet air defense weapons to protect its mechanized forces.

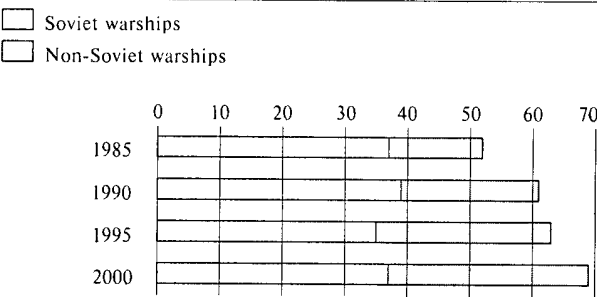
[redacted] The Army already has SA-6s and wants to replace its ZSU-23/4 anti-aircraft and man-portable SA-7 surface-to-air missiles, probably with Soviet systems. [redacted]

**Navy**  
The Navy is the Indian service most dependent on the USSR, although we expect the percentage of Soviet warships in its inventory to decline over the next decade. Indigenous construction of Indian-designed ships will be the primary cause of this decline.

[redacted] beginning next year as well as indigenously designed Project 15 cruisers and Bantam-class corvettes, which incorporate Soviet and Western technology. [redacted]

**West European Ships.** The Navy is buying a small number of specialized ships and naval systems from the West to complement its largely Soviet-built fleet, [redacted] India has on order four West German TR-1500 diesel submarines, two of which are under construction in Bombay. The Indians have agreed to purchase the British aircraft carrier Hermes, another squadron of Sea Harrier V/STOL fighters, and 26 more Sea Eagle antiship missiles. They also are looking for Western gas turbines to power the 10 to 30 warships that will be built in Indian yards over the next 10 years, [redacted] Western technology, moreover, is being sought to build mine countermeasures

**Figure 5**  
**Indian Navy Major Warships,**  
**1985-2000**



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ships and two new aircraft carriers in the 1990s. We expect the Navy to order additional West European and US sensor and communications systems for many of its ships. [redacted]

**Soviet Deliveries.** Although we expect that the Soviets will dominate sales of small missile combatants, the number of Soviet-built combatants in the Indian Navy will remain about the same and as a percentage will decline. [redacted]

[redacted] Eight Bear antisubmarine warfare patrol aircraft are scheduled to arrive before the end of the decade. Soviet specialists, moreover, will continue to expand Indian port facilities at Visakhapatnam. [redacted]

**Gandhi's Look to the West**

We believe the tension between changing Indian military requirements and Soviet unwillingness, and in some cases inability, to meet New Delhi's need for high technology will be aggravated by Prime Minister

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Gandhi and Gorbachev in Moscow, May 1985 [redacted]

Rajiv Gandhi's efforts to modernize India's military establishment.

Gandhi's arms diversification drive is part of his larger effort to accelerate India's economic development by gaining access to Western technology.

[redacted] The critical gap in technology for India—and for the Soviets—is in computers and electronics, fields in which the United States, Western Europe, and Japan excel.

We believe the Indians carefully balanced a series of high-level visits by Indian, Soviet, and US defense officials last year to arrange for better Indo-US relations, while at the same time confirming their close ties to Moscow. Then Defense Minister Rao—and Prime Minister Gandhi—visited both the USSR and the United States. The Indians also scheduled



Army General E. Ivanovsky, Commander in Chief of Land Forces the USSR, and Arun Singh, Minister of State for Defense, in New Delhi, December 1985 [redacted]

consecutive visits by the US Under Secretary for Defense, the US Secretary of the Air Force, and the Commander in Chief of the Soviet Air Force in May. Later in 1985, the Indian Army Chief of Staff visited Moscow before New Delhi received his Soviet counterpart in December. The US Chief of Naval Operations also visited India in late 1985. [redacted]

The Gandhi government, in our judgment, has insulated its arms negotiations with Western suppliers from potentially disruptive political problems, indicating the importance India attaches to acquiring Western arms. The spy scandal in January 1984 that initially centered on French commercial and military espionage did not prevent Gandhi from visiting French armament manufacturers in May and approving the purchase of nine more Mirage 2000s. Similarly, Indian dissatisfaction with British statements about Sri Lanka's communal problems and London's unwillingness to extradite Sikh dissidents did not prevent the purchase of eight British Aerospace Sea Harrier fighters and 26 Sea Eagle antiship missiles.

#### Soviet Responses

We believe Moscow judged early in 1985 that several factors would limit Gandhi's shift in Indian arms procurement and was confident that India would

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Admiral V. N. Chernavin, First Deputy Commander in Chief of the Soviet Navy, and Admiral R. H. Tahiliani, Chief of the Indian Navy, in New Delhi, September 1985

The Soviets took several steps early last year to ensure that Gandhi did not go too far in modernizing his military with Western imports. According to Embassy reporting, the Soviets worked hard to guarantee that Rajiv would visit Moscow before Washington in 1985, believing such a schedule would symbolize the primacy of their relationship. Although the Soviets were probably disconcerted by Gandhi's refusal to visit Soviet high-technology centers in Siberia and to endorse Moscow's Asian collective security plan, they apparently were reassured that India would not fundamentally change its relations with Moscow. Soviet and East European embassy staffs in New Delhi canvassed the diplomatic community for views on the status and direction of Indo-US relations, and the Soviet press stressed the threat US aid to Pakistan posed to India, according to Embassy reports.

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continue to rely on the USSR for most of its major arms purchases.

according to Embassy sources in New Delhi, the Soviets believed Indo-US relations would progress only slightly unless Washington reduced its security assistance to Islamabad. The Soviets, in our view, calculated that US frustrations with bureaucratic obstacles in India, fears that technology would be diverted to the USSR and its allies, and concerns about possible Pakistani reactions would limit the transfer of US military technology to India. Moscow probably assumed that India's defense establishment and economy had too much at stake for New Delhi to reduce its relations with the USSR significantly.

After New Delhi and Washington reached agreement on the technology transfer Memorandum of Understanding in mid-1985 and began defense cooperation in selected areas, Moscow more frequently played its trump card: its proven ability to provide advanced equipment.

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that the Soviets will continue to use a mixture of new arms offerings and threats to take a tougher line on financing in future arms negotiations to keep the Indians tied to Moscow.

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**New Offerings**

We expect Moscow will continue to offer India new weapon systems, some of which have never been exported to the Third World. [REDACTED]

Another possibility is that the Soviets will transfer a nuclear-powered attack submarine to India. [REDACTED]

[REDACTED] Indian naval personnel trained on nuclear submarines in Vladivostok [REDACTED]

[REDACTED] a Charlie-class nuclear-powered cruise missile submarine and a barracks ship moored in an area normally used only by diesel submarines. We believe there is a better than even chance that the Indians will purchase a Victor-class nuclear attack boat, which has the same propulsion system as the Charlie. Other new systems that the Soviets might transfer include advanced surface-to-air and surface-to-surface missiles. [REDACTED]

The Soviets, in our judgment, will step up their attempts to divert Indian attention from Western competitors and delay indigenous Indian programs by offering equipment that superficially meets Indian requirements. [REDACTED]

**Signaling Displeasure**

We believe the Soviets will balance their generosity by reminding New Delhi that Rajiv's turn to the West could make future Indo-Soviet deals less advantageous for the Indians. [REDACTED]

the Soviets have raised the interest rates being offered to finance the MIG-29 purchase, pointedly noting that, if New Delhi can afford the interest rates of Western aircraft suppliers, it is only fair that Moscow receive a higher return. [REDACTED]

[REDACTED] have asked for partial payment in

hard currency for the two MIG-29 squadrons. The Soviets could apply additional pressure through the plethora of Indo-Soviet spare parts, maintenance, and training agreements. Indian annual payments for Soviet military equipment, which we expect to double to near \$1 billion in the next several years, will provide Moscow with yet another pressure point. [REDACTED]

We doubt that the Soviets will use stronger measures—such as suspending deliveries of new equipment—to signal displeasure unless they conclude that India is poised to radically reduce its dependence on Moscow for security assistance. Moscow probably realizes that heavyhanded pressure would antagonize India and accelerate its diversification program. Moscow may have learned a lesson from its restrictions on arms deliveries to both belligerents in the early stages of the Iran-Iraq war, a step that angered Iraq and benefited Iran without producing any change in the policy of either country. [REDACTED]

**Implications for the United States**

The United States will not displace the Soviet Union as India's primary arms supplier and will not even achieve sales comparable to those of Britain, France, and West Germany. Any US gains at the expense of the Soviet Union in security assistance to India are likely to be gradual. In addition to its need for Soviet arms to complete current defense modernization programs, New Delhi will continue to rely on Moscow as a major trading partner and strategic ally. US and Chinese military aid programs to Pakistan will reinforce the Indo-Soviet relationship for the foreseeable future. [REDACTED]

We believe that the best US opportunities will lie in providing production technology subsystems for Indian-designed weapons. Indian defense officials have specified antiarmor weapons technology, the LCA project, and the Indian National Test Range as specific areas for cooperation. US firms have offered to assist India in producing a self-propelled artillery [REDACTED]

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**Greater Dependence on Moscow:  
An Alternative Scenario**

India could become more dependent on the Soviet Union for security assistance if one or more of its key indigenous weapon development programs—the Arjun tank, the Light Combat Aircraft, the Advanced Light Helicopter, and the 1,200- and 4,500-ton frigates—failed. Hard currency shortages preventing the purchase and licensed production of West European weapon systems would further increase Indian dependence. Our estimates of a worst case scenario indicate that by the end of the century almost 90 percent of India's combat aircraft, 60 percent of its armored vehicles, and 75 percent of its major warships would consist of Soviet-supplied equipment. [ ]

Without the LCA, a new Western jet trainer, and additional purchases of French Mirage 2000 fighters, we would expect the Indian Air Force to acquire more MIG-27s, new SU-25 and L-39 attack aircraft, and approximately 150 MIG-29 air superiority fighters. Two of these aircraft types in addition to the MIG-27, which is already produced under license in India, could fill the production lines in India's aircraft industry. This would leave the Indians with about 130 Western combat aircraft in their force.

[ ]

If the Arjun main battle tank does not enter production in the late 1980s, [ ]

[ ] This would be more than double their production rate for the Vijayanta, requiring a new armored vehicle factory now under construction.

Additional Soviet warships for the Indian Navy would not cause a further increase in the percentage of Soviet vessels in its inventory, but would limit the decline to slightly more than 50 percent that we believe will probably occur. The Indians could purchase a variant of the already developed Koni-class frigate and additional Kashin-class destroyers if they cannot get their already delayed Project 15 and Bantam-class frigate programs under way. [ ]

system and in refitting Indian and Soviet-model tanks. Further down the road, New Delhi may purchase major US weapon systems, such as attack helicopters and transport aircraft. [ ]

US gains will cause problems for the Soviets disproportionate to their true military significance or dollar value. Decisionmakers in Moscow will view them as indications of Indian policy shifts. They will perceive that, if the United States can sell India major subsystems and defense production technology in the second half of the 1980s, it will be able to supply major weapon systems in the next decade. This will be particularly true if Western—not necessarily US—

firms are successful in the Indian LCA and Arjun tank programs. Moscow will see the small initial sales of US defense items, such as night-vision devices, as opening the door to larger US defense relations with India. If current plans are fulfilled to have Indian officers participate as observers aboard US naval vessels in exercises outside the Indian Ocean and attend an increasing number of military courses in the United States, they will add significantly to Moscow's worries. [ ]

Developing a defense relationship with the Indians will require patience on the part of both Washington and US defense industries. Washington will be faced

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with complying with New Delhi's seemingly endless delays in completing agreements and understandings. Last year's extended delay in obtaining Indian acceptance of the nuclear assurances attached to the Memorandum of Understanding on technology transfer is an indicator. Since then, New Delhi has resisted a formal General Security of Military Information Agreement, preferring ad hoc arrangements instead.

[REDACTED]

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US firms are likely to find the Indians' arms negotiating style exasperating and their procurement procedures frustrating.

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unsuccessful US attempts to sell C-130 transport aircraft and TOW missiles probably will dissuade other US arms manufacturers from making a strong attempt to develop an Indian market.

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## Appendix A

### Major Indo-Soviet Arms Negotiations and Agreements

#### Air Force

**MIG-21bis.** India has been coproducing various models of the MIG-21 since 1966 and is capable of making most of the components for the aircraft. We expect the MIG-21 assembly line to shut down in the next year or two to make room for expanded MIG-27 or possible MIG-29 production, although India will probably retain the capability to make MIG-21 spare parts. [redacted]

**MIG-23/27.** The Soviets agreed to sell India a ground attack variant of the MIG-23—the Flogger H—as part of a major arms agreement in 1980, [redacted] Moscow offered quick delivery of the MIG-23 at low prices and also offered to allow India to coproduce the aircraft to curtail Indian coproduction of the Anglo-French Jaguar fighter-bomber. In March 1982 Moscow used similar tactics against the Mirage 2000. [redacted]

[redacted] The MIG-27 coproduction program appears to be on schedule, and the Indians rolled out the first Flogger J last December. India continues to import both the Flogger H and an interceptor variant, the Flogger B, from the USSR. [redacted]

**MIG-29.** [redacted] the Soviets offered India the MIG-29 fighter for the first time in March 1982, along with the MIG-27, as part of their effort to head off a Mirage 2000 deal. [redacted]

[redacted] The Indians test-flew the MIG-29 two or three times during 1984, and [redacted] press reports that the two countries signed what was probably an agreement in principle

in July 1984 for the sale and coproduction of the aircraft. Since then, the expected final agreement and the delivery of the initial aircraft have been delayed.

[redacted] and unwillingness to supply frontline avionics and engines. [redacted]

[redacted] but this was probably a negotiating tactic. [redacted]

**IL-76 Mainstay AWACS.** In its search for a counter to possible Pakistani acquisition of the US E-2 Hawkeye early warning aircraft, the Indians have examined a wide range of options, including European aircraft and electronics and the AWACS variant of the Soviet IL-76. In January 1985 an Indian team traveled to the USSR to evaluate Mainstay in a flight demonstration. [redacted]

[redacted] We believe the Soviet AWACS program has encountered technical problems, which, together with the sensitivity of the equipment, probably rule out exports in the next several years. [redacted]

**AN-32.** The Indians contracted to purchase 98 AN-32s, valued at \$539 million, in 1981 and have taken delivery of more than 60. They have been quick to press their AN-32s into service. [redacted]

[redacted] that AN-32s have replaced C-47s and C-119s at several Indian airfields. [redacted]

[redacted] operating at high-altitude airfields and in airborne operations is about half that specified by the Air Force and promised by the Soviets. [redacted]

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**IL-76.** New Delhi ordered at least eight IL-76 transports in 1984 for \$155 million.

The first six arrived last year.

Admiral Gorshkov as early as 1977.

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**Destroyers.** India has taken delivery of three Kashin-class destroyers ordered in 1976 and apparently has exercised its option to buy two more. Delivery of the fourth ship is likely this year.

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**Frigates.** India has asked the Soviets to supply 1,900-ton Koni-class frigates, however, that the Indians plan to build a dozen 1,200-ton Bantam-class frigates and an unknown class of 1,800-ton frigates to replace their aging Petyas, leaving the Koni sale in doubt.

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#### Navy

**Nuclear Submarines.** An agreement in principle for transfer of one or two nuclear-powered submarines may have been reached during high-level Indian visits to Moscow in late 1982 and mid-1983.

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**Mine Warfare.** India received six Soviet Natya-class minesweepers in 1978-80 and probably signed a contract for six more around 1983.

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We expect the first delivery in 1986. These vessels will not provide a state-of-the-art mine warfare capability because of their steel hulls and lack of modern mine countermeasures equipment. The Indians want to purchase this equipment and glass-reinforced plastic hull technology from the West Europeans.

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**Diesel Submarines.** India purchased six Kilo-class diesel submarines in 1984.

The first of these was launched at

#### Cruisers.

**Amphibious Ships.** India took delivery of two Polish-built Polnocny-class amphibious ships in 1985. A third is being built under a 1982 contract.

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This sale was discussed in general terms with

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**Maritime Patrol Aircraft.** The Soviets agreed in late 1984 to provide [redacted]

[redacted] These long-range maritime aircraft have not been sold to any other country. [redacted]

**Helix Antisubmarine Warfare Helicopters.**

[redacted] to replace the KA-25 Hormones on board their Kashin destroyers. [redacted]

**MI-25 Hind.** India acquired eight MI-25 Hind helicopters in 1984 and took delivery of another four in 1985, [redacted]

[redacted] to Western Europe last fall to look at the British Lynx and Italian Mongoose helicopters. Indian defense officials have also shown an interest in the AH-1 Cobra. [redacted]

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### Army

**T-72 Tanks.** India has purchased more than 800 T-72 tanks and has taken delivery of about 500, according to defense attache reports. The Army was dissatisfied with the initial deliveries, which had been reconditioned and did not have laser rangefinders. Subsequent models delivered under the 1982 Indo-Soviet arms agreement have been upgraded T-72Ms with improved armor and fire-control systems. [redacted]

[redacted] Press reports say that, because the project is delayed, additional T-72s will have to be purchased from the USSR. [redacted]

[redacted] We believe New Delhi will make a decision on full T-72 coproduction arrangements when it decides whether to begin development of its Arjun main battle tank program in 1988. [redacted]

**BMP.** The Indian Army has imported over 500 BMP-1s, [redacted] Additional deliveries can be expected over the next five years until local production of the improved BMP-2 begins in the early 1990s. Ground was broken last November for a new armored vehicle production facility near Medak. Eventually, [redacted]

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## Appendix B

### Coping Without Soviet Military Assistance: A Viable Military Option for India

In our judgment, the impact on India of a Soviet cutoff would be less severe than it was on Egypt in 1974-75 because India has a sizable nucleus of Western arms; experience with Western logistic and training systems; defense industries capable of producing a wide range of subsystems and spare parts; and a large, unused stockpile of Soviet arms. We believe that, although overall readiness would decline as spare parts inventories were consumed and training exercises curtailed, Indian military forces could thwart a Pakistani attack after a cutoff of Soviet military assistance. We also believe they could maintain an effective defense against Chinese incursions in the north. New Delhi could cope in the short term by turning to other producers of Soviet-model equipment and substituting Western spare parts. We do not believe the Indians could sustain a large-scale program of Western military purchases unless they received substantial financial help from the West. [ ]

#### Effects of a Cutoff

A cutoff of military assistance by the Soviet Union in the near term would quickly produce a decline in the operational readiness of India's Soviet-built equipment, which includes 65 percent of India's combat aircraft, all of its modern fixed-wing and helicopter transport aircraft, almost 40 percent of its tanks, all of its infantry combat vehicles, and 70 percent of its major naval combatants. [ ]

spare parts stockpiles for aircraft are already below what the Indians consider acceptable. [ ]

The withdrawal of the estimated 500 Soviet military technicians in India would complicate Indian efforts to keep its Soviet arsenal fully operational. Most of these technicians are involved in various defense coproduction projects, but many also perform repairs or modifications on Soviet-made equipment. [ ]

We would expect, on the basis of Egypt's experience in 1975, an additional 30-percent decline in operational readiness of the Indian inventory within 12 months.

The Air Force would be hit hardest, with aircraft avionics and engines becoming nonoperational within a matter of months, along with radars and other electronic equipment. [ ]

[ ] All MIG aircraft engines are still sent to the USSR for overhaul. The readiness of India's naval vessels, particularly its Foxtrot submarines, which regularly suffer breakdowns of key propulsion and sensor systems, would decline over a slightly longer period of time. In our judgment, India could keep a high percentage of its armored vehicles and artillery pieces in service for a year or longer. [ ]

#### Coping

We believe the Indians would take several steps to keep their Soviet equipment functioning. They would immediately curtail training and normal peacetime operations, accepting a reduction in operator proficiency. They would also step up the production of MIG-21 spare parts, which they produce under license. In one to two years, they could produce a modest volume of spares for MIG-27 ground attack aircraft, T-72 tanks, and BMP-2 armored vehicles, which are just starting to be assembled in India. The Indians could not build and maintain these vehicles completely on their own for several years. Reverse-engineering of major subassemblies that the Indians import from the USSR would probably take several years and cost tens of millions of dollars. [ ]

The Indians could purchase subsystems and spare parts for their Soviet equipment from foreign sources. North Korea, Yugoslavia, and Egypt coproduce a wide variety of Soviet weapons now in the Indian inventory—SA-2 and SA-7 surface-to-air missiles, T-72 tanks, BM-21 multiple rocket launchers, MIG-21 fighters, and AT-3 antitank guided missiles—and

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all three countries have sold weapons and munitions both openly and covertly to countries embargoed by the USSR. Many Soviet weapons and spares are also widely available from private arms brokers who secure them from Poland, East Germany, and Czechoslovakia, although a determined Soviet effort to restrict the flow of military materiel from these countries to India would constrict New Delhi's access.

[REDACTED]

Western arms producers would be another logical source for Soviet spare parts and modifications. Over the last 10 years, many Western arms manufacturers have helped India and other Third World countries maintain and upgrade their Soviet-model equipment. New Delhi already has put French air-to-air missiles and Western fuel pumps on MIG-21s, British-designed guns on T-55 tanks, and US navigation systems on AN-32 aircraft. With additional Western assistance, it could reengine T-72 tanks, modernize SA-6 surface-to-air missiles, and upgrade the avionics on many of its combat aircraft. We estimate that each of these programs would take two to three years to get under way.

If the Indians anticipated a long-term cutoff, we believe they would increase the number of Western-made weapons in their inventory and step up indigenous development and production of weapons designed with Western assistance. Several of these programs are already under way—the Air Force's Light Combat Aircraft and Advanced Light Helicopter and the Army's Arjun main battle tank. British firms are involved in the design and construction of surface warships. These programs could be accelerated, perhaps dramatically, by using a larger share of foreign components instead of waiting for Indian defense industries to develop them. Alternatively, the Indians could switch to licensed production of a fully developed Western system to reduce their development costs. For example, they could choose a Western aircraft such as the US F-20, French Rafale, or Swedish Grippen fighter to fulfill the Light Combat Aircraft requirement instead of developing the aircraft themselves.

New Western systems would require new training and logistic systems. India already has some familiarity with Western maintenance and training programs,

but these would have to be expanded dramatically. In the short term, this would complicate the already complex logistic system India maintains because of its mixed Soviet and Western inventory.

We believe that over the long haul New Delhi would end its policy of not engaging in joint maneuvers or training exercises with foreign militaries. India has maintained this policy with respect to both the Soviet Union and the West to demonstrate military self-sufficiency and political nonalignment. After breaking with the Soviets, we believe New Delhi would agree to joint training exercises with Western powers as many other nonaligned states have done. This would expose the Indian Army, Navy, and Air Force to new tactics, logistics, and maintenance procedures that arguably would do more to increase their war-fighting capabilities than significant new arms purchases.

#### Economic Costs

We estimate that it would cost the Indians at least \$15 billion—equivalent to their current annual import bill—to replace the major Soviet weapon systems in their arsenal with comparable Western armaments. The Indians could reduce these costs if they sold off the Soviet equipment now in their inventory, obtained concessional financing, coproduced new Western arms, and replaced older equipment on a less than 1-for-1 basis.

The Indian economy could not sustain a large-scale program of Western arms purchases, in our judgment, unless the government received substantial financial help from the West and spread the rearmament costs over a period of at least 20 years. In the case of a Soviet cutoff, India probably would try to redirect the nearly \$500 million worth of goods and services now paid annually to the USSR for military imports, but many of these goods and services would not be competitive on world markets. If exports could not be expanded significantly, Gandhi's economic modernization program—which we believe may already be creating balance-of-payments problems for India—would have to be scaled down. Such cuts could probably be reduced by increased access to Western funds.

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### Estimated Effects of a Soviet Cutoff on Indian Operational Military Equipment, 1985

	Combat Aircraft	Tanks	Major Warships
Total operational Soviet-origin equipment	195	815	34
After cutoff	136	570	24
Operational non-Soviet- origin equipment	123	750	9
Total operational equipment after cutoff	259	1,320	33
Pakistani opera- tional equipment	157	742	22

### Strategies

We believe India could deter and successfully defend against an attack by Pakistan. India would maintain numerical superiority in fighter aircraft, tanks, and warships by virtue of its diversified inventory of Soviet, Western, and indigenously produced weapons. It would probably try to maintain current force ratios along the border by drawing on units deployed in the east and north. This would not severely affect the balance with China that is already in India's favor along their common border, but it probably would set back counterinsurgency operations in the northeast.

New Delhi would have to change its current forward defense strategy, which is predicated on mounting strong preemptive attacks and counteroffensives directed at Pakistan's armored forces and relying on attrition for success. Shortages of spare parts and munitions would doom such operations from the outset. We suspect that the 70 to 80 Indian advisers in Iraq are aware of the difficulties experienced by Iraqi forces invading Iran in 1980-81 when the Soviet Union suspended direct arms deliveries. We believe India would switch to counteroffensives aimed primarily at the weaker links in Pakistan's defenses, particularly the exposed logistic lines in Sind. Such a strategy would entail fewer logistic problems and could make greater use of maneuver.

### Timing

In our judgment, India will not necessarily be better prepared to deal with a Soviet cutoff in five years than it is today. The advanced Soviet weapons—including MIG-29 fighters, MI-26 helicopters, Koni-class frigates, Kilo-class submarines, Tarantul missile corvettes, TU-142 Bear F antisubmarine warfare patrol aircraft, and

These weapons are more complex and are in fewer inventories around the world, limiting the amount of potential assistance available from foreign militaries and defense industries. Indian forces will also be less familiar with the operation and maintenance of these systems than they are with their current Soviet weapons, making them more dependent on Soviet advisers and technicians.

We believe India's preparedness for such a cutoff will be improved only modestly over the next few years by the delivery of Western equipment now on order or soon to be purchased. By the end of the decade, India probably will have an embryonic collection of new Western attack helicopters, remotely piloted vehicles, light tanks, and minesweepers, in addition to towed and self-propelled artillery, diesel submarines, Mirage 2000 and Harrier fighters, and maritime patrol aircraft.

Rajiv Gandhi's search for Western arms, however, is aimed more at acquiring defense production technology for future weapon systems, which would not necessarily help India cope with the immediate effects of a Soviet cutoff. Moreover, some programs utilizing this technology—such as the Light Combat Aircraft—will still be several years from entering production at the end of the decade. Existing programs, such as the Arjun main battle tank, could better replace Soviet equipment.

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